

# METHOD AND APPARATUS FOR SYNCHRONIZING CO-CAST CONTENT WITH VIEWERING HABITS

## CLAIM OF PRIORITY

This Application claims priority from USPTO provisional application no. 60/441,672 filed on January 21, 2003, and incorporates said application by reference as if fully set forth herein.

## BACKGROUND OF THE INVENTION

### Technical field

The invention herein discloses an exemplary method and apparatus for dynamically delivering content to a viewer upon his television viewing habits.

### Description of the Prior Art

Currently, the majority of television program distributors, whether cable, broadcast or satellite, encode a small portion of the television signal with identification (index) data. In analog television the region used is known as the vertical blanking interval. The vertical blanking interval (VBI) is a portion of a television signal that can carry information other than video or audio, such as closed-caption text and stock market data. The interval in sending a video signal is required for the time it takes the electron gun in a television monitor's cathode ray tube (CRT) to move back up to the top of the tube. VBI data can be inserted by a content provider and transmitted to a special receiver that connects to a computer. In digital television, MPEG2 data streams offer a similar capacity for inserting Internet data alongside the audio and video information. This unused

region of the television signal can occupy significant bandwidth, upwards of 96 kilobits per second (Kbps), roughly twice as fast the best dial-up modems.

These unused regions have been tapped to carry index data may include channel number, closed captioning data, time playing, VCR+ information, program identification, etc. Since the encoded data does not occupy any portion of the content data, there is no degradation of the content quality.

Content distributors have not used this data to increase revenue models or personalization substantially beyond the traditional pay per view model. In a traditional pay per view system, the content is transmitted in a format unreadable by most television sets. However, an authorized set-top box can descramble the content. The content distributor embeds within the unused portion of the video signal permission for the set-top box to descramble the content.

Besides pay per view, some content distributors use a bi-directional set top box to report the viewing habits of its customers. However, that information is generally used in the aggregate, to determine what types of content to distribute to the customers as a whole, rather marketing to individual customers. Alternatively, this information may be used for off-line solicitations, i.e. sold to third parties who then solicit the customer via traditional means such as telephone and direct marketing.

For purposes of this invention, a television signal refers to any electromagnetic signal capable of carrying audio or video data. Similarly, for purposes of this invention, a set top box includes a traditional set top box configured to send and receive television signals and internet data, as well as a

set top box enhanced with one or more features including, mass storage capabilities such as hard drive, optical drives, compact flash, etc. as well as content time shifting such as Tivo™ or Replay-TV™.

The present invention is unique and exemplary in that it permits advertisers, content distributors, etc. to use the end-users television viewing habits to personalize the on-line distribution of content. For purposes of this disclosure on-line distribution of content means the dynamic and immediate delivery of personalized content via electronic means. For example, an advertiser may send wireless ads to an end-user whose television viewing habits suggest a particular receptivity to the goods or services provided. Similarly, a content provider might send certain types of content to the end-user based upon the current television show being watched. Therefore it is necessary for the invention to determine the viewing habits of each end-user as well as the current television show being watched.

## SUMMARY OF THE INVENTION

The current invention represents a method and apparatus for delivering personalized content to an end-user. This invention determines the television viewing habits of the end-user and inserts content into the non-visual portion of the television signal which is then transmitted to the end user's wireless device, computer system, or television.

## BRIEF DESCRIPTION OF THE FIGURES

Figure 1 is a block diagram of a first embodiment of the overall invention.

Figure 2 is a flow diagram of one embodiment of the overall invention.